

Application No.: 09/787,353  
Old Attorney's Docket No. 032658-016  
New Attorney's Docket No. 0120-016  
Page 10

### REMARKS

Claims 1-35 and 37-39 remain pending in the application, with claims 1-29 and 34 having been withdrawn from consideration and only remaining claims 30-33, 35 and 37-39 being examined. Claims 30 and 39 have been amended without introduction of new matter. Favorable reconsideration is respectfully requested in view of the above amendments and the following remarks.

Claims 30-33, 35, and 37-39 stand rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement. In particular the Office is concerned that the limitation "the bus ... does not allow circulating empty packets," as expressly recited in each of claims 30 and 39, does not appear in the specification or the drawings, and is possibly at odds with the specification at page 31, lines 18-24, which state that "... whenever the bus is idle, the arbitration unit places empty packets on the bus at every available clock cycle. The empty packets travel along the bus, and may be used by any module that wishes to make a transaction".

In addition, claims 30-33, 35, and 37-39 stand rejected under 35 U.S.C. §101 for alleged lack of utility. In this respect, the Office is concerned that the limitation "the bus ... does not allow circulating empty packets" is at odds with: the recitation in claim 30 that "the arbitration unit is operable to issue empty packets during periods when the bus is idle, the empty packets being usable by a module to gain access to the bus..."; claim 39's recitation of "issuing empty packets from the arbitration unit during periods when the bus is idle"; and the specification, which states at page 31, lines 18-24, that "... whenever the bus is idle, the arbitration unit places empty packets on the bus at every available clock cycle. The empty packets travel along the bus, and may be used by any module that wishes to make a transaction."

These rejections (i.e., the one under Section 112, and the one under Section 101) are related, and are therefore traversed here together.

The limitation in question (i.e., "the bus ... does not allow circulating empty packets") was introduced into the claims by an Amendment filed on May 2, 2005, and its origin can be traced back to Applicants' Amendment filed on November 22, 2004 in which Applicants presented an argument distinguishing their claimed invention over the subject matter disclosed in U.S. Patent Number 4,709,364 to Hasegawa ("Hasegawa"). In particular, the Hasegawa patent discloses a token ring packet switched system which has no central

Application No.: 09/787,353  
Old Attorney's Docket No. 032658-016  
New Attorney's Docket No. 0120-016  
Page 11

arbitration system. Applicants' invention involves a pipelined bus, not a token ring, and in this respect Applicants argued "The techniques used in Hasegawa are not applicable to a pipeline bus embodying the subject matter defined by claims 30 and 39, *since such a pipeline bus does not allow circulating empty packets.*" (Emphasis added.)

The Office responded to Applicants' November 22<sup>nd</sup> argument by saying, *inter alia*, that "The Examiner further notes that there are no limitations in the claims requiring a pipeline bus that does not allow circulating empty packets." (See numbered paragraph 16 of the Office Action mailed on January 31, 2005.) In view of the Office's remark, Applicants considered that including such a limitation in the claims would help to further favorable prosecution. Accordingly, in the Amendment filed on May 2, 2005, claims 30 and 39 were amended to recite "wherein the bus is a pipelined packet switched bus that does not allow circulating empty packets."

The intention of that amendment was to have the claims expressly define that the bus structure of the claimed invention is not a closed ring. The word "circulating" was chosen because it means to move *around* (i.e., as in a ring). The Office has now offered a dictionary definition of "circulating" which reads "to move around *or through*". The present rejections under Sections 112 and 101 rely on the "or through" part of the definition.

In order to further favorable prosecution of this application, claims 30 and 39 are again being amended, this time to recite "wherein the bus is a pipelined packet switched bus that is open-ended." Again, the purpose of this amendment is to have the claims expressly define that the bus structure of the claimed invention is not a closed ring.

Support for this amendment is found throughout the specification. For example, the introductory text spanning pages 1 and 2 of the application refers to data latency relating to the "size" of the bus. On page 7 is text defining "a plurality of bus portions arranged in series" with express mention of a "last in the series." Clearly, there can be no "last" bus portion in a ring. More particularly, there is unequivocal reference in page 6, line 35, to "one end of the bus". Finally, the bus structures illustrated in Figures 2, 3, 4, 5, 11 and 31 and the related description, put it beyond doubt that the bus is linear, in that it has ends and is not a closed loop or a ring, having no ends. The whole architecture of an interconnected primary and secondary bus negates any possibility of the bus even being considered as consisting of a closed loop or ring. The crucial distinction is that an empty packet, once launched onto the bus (by an arbiter or by a module connected to the bus), can only travel along the bus in one

Application No.: 09/787,353  
Old Attorney's Docket No. 032658-016  
New Attorney's Docket No. 0120-016  
Page 12

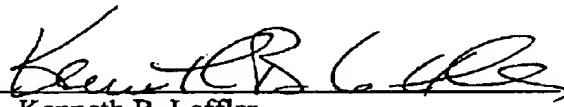
direction. If it is not picked up by a module downstream, the packet reaches an end of the bus, where it ceases to exist. The packet is therefore not able to return to the start point because of the bus structure.

For the foregoing reasons, claims 30-33, 35, and 37-39 are believed to be supported by an enabling disclosure, and to define an operable, useful invention. Accordingly, it is respectfully requested that the rejections of claims 30-33, 35, and 37-39 under Sections 101 and 112, first paragraph be withdrawn.

The application is believed to be in condition for allowance. Prompt notice of same is respectfully requested.

Respectfully submitted,  
Potomac Patent Group PLLC

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By:   
Kenneth B. Leffler  
Registration No. 36,075

P.O. Box 270  
Fredericksburg, Virginia 22404  
703-718-8884

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Kenneth B. Leffler